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Stemming the Flow of High

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WAshington, Feb. 27 — A struggle between military officials who want to stem the flow of advanced technology and ideas to the Soviet bloc and scientists and industrialists who want to preserve as much open technical communication and trade as possible has been heating up in recent days.

The Senate is preparing to vote this week on a hotly debated bill to restrict the export of high technology to the Soviet Union and other countries. And a staff report to the National Academy of Sciences has complained that the Reagan Administration's effort to restrict the flow of technical information and equipment to foreign nations is far more restrictive than an academy panel had recommended.

Meanwhile, both the Pentagon and Commerce Department are developing new regulations governing the dissemination of information that, while unclassified, might be of military value. And an interagency group headed by the White House science office and the National Security Council is attempting to develop guidelines for the entire Government.

The steady drumbeat of activity is creating waves of apprehension among scientists. A delegation of university presidents, led by Paul Gray of the Massachusetts Institute of Technology, visited Secretary of Defense Caspar W. Weinberger last month to express concern that the country's scientific productivity might be harmed by an overzealous crackdown. Another group was convened by the National Science Foundation last month to assess possible damage from export regulations recently proposed by the Commerce Department.

The Background

Concern over the leakage of scientific data and sophisticated technology was raised in January 1982 by Adm. Bobby R. Inman, then deputy director of Central Intelligence, who warned a scientific meeting that a "hemorrhage of the country's tech-

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nology" to the Soviet bloc would eventually produce a "tidal wave" of public outrage. High officials of the Defense Department and intelligence agencies soon joined the fray with assertions that the Soviet Union had gained much of its most advanced weaponry by drawing on Western technology and ideas. The Russians were said to use a variety of legal and illegal means, including espionage, theft, bribery, legal purchases, attendance at open scientific meetings, and perusal of the vast amount of unclassified scientific literature.

Top military and intelligence officials called for a crackdown on illegal activities and greater restrictions on legal trade and scientific communication. Many technological products were already under tight restrictions, but emphasis increasingly shifted to the ideas and data that make such technologies possible. Officials in key agencies began revising lists of information that had to be controlled. And military reviewers pressured scientists who had performed unclassified research under military contract to withdraw papers that were to be presented at open scientific meetings.

Alarmed scientific and academic

leaders protested. A National Academy of Sciences panel, headed by Dale R. Corson, president emeritus of Cornell University, in a report issued Sept. 30, 1982, urged that restrictions on disseminating unclassified scientific ideas be sharply limited to only a few "gray areas." Ever since, a struggle has been under way in Federal agencies and Congressional committees between proponents of a tough a crackdown and advocates of openness, who want a highly selective effort that will restrict American science and industry as little as possible.

For Stiffer Curbs

The chief argument for restricting the dissemination of knowledge or high technology to the Soviet bloc is that the most advanced information in such fields as microelectronics, computers and material science might be of immense value to Soviet military scientists. Intelligence officials contend Soviet missile accuracy was improved by legal purchases of American ball-bearing equipment and that the Russians have improved their guidance and radar systems and many weapons by legal and illegal acquisitions of Western technical data. Such acquisitions, they say, allow the Soviet Union to overcome technical difficulties that might otherwise slow their efforts to develop new weaponry. Intelligence officials say the Russians are putting immense effort into industrial and scientific espionage.

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